UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,505	06/14/2001	Bipul Binit Sinha	oracle01.016	7778

			EXAMINER

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EXAMINER
LEROUX, ETIENNE PIERRE

GORDON E NELSON
PATENT ATTORNEY, PC
57 CENTRAL ST
PO BOX 782
ROWLEY, MA 01969

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	Application No. 09/881,505	Applicant(s) SINHA ET AL.
	Examiner Etienne P LeRoux	Art Unit 2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _03 May 2004_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _2-31_ is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _2-31_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _14 June 2001_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

     If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All b)☐ Some * c)☐ None of:

         1.☐ Certified copies of the priority documents have been received.

         2.☐ Certified copies of the priority documents have been received in Application No. _____ .

         3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

     a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2, 4-6, 8, 10-23, 25-27 and 29 are rejected under 35 U.S.C. 102(e) as being

anticipated by US Pat No 6,088,694 issued to Burns et al (hereafter Burns).

Claim 11:

Burns discloses a method of ensuring that a first component of a distributed system that

exchanges messages belonging to a transaction with one or more other components of the

distributed system is additionally aware of a state of an other component, the state being is

relevant to a protocol employed with the transaction and the method comprising the steps

practiced in the first component of:

- receiving an augmented one of the messages, the augmented message having been augmented by

  the other component to additionally contain information indicating the relevant state of the other

  component [Fig 4, read-only flag in the command, col 9, lines 59-65]

- retaining the relevant state from the augmented message; and using the retained relevant state to

  optimize the protocol [col 9, line 65 – col 10, line 4]

Claim 2:

Burns discloses the protocol ensures that the results of the transaction are consistent in

the components and in the step of receiving an augmented one of the messages, the information

indicating the relevant state indicates whether the transaction will modify data in the other

component [col 9, line 59 – col 10 line 4].

Claim 4:

Burns discloses the distributed system is a distributed database system and the

components are database systems therein [Fig 4]

Claim 5:

Burns discloses a method of ensuring that a first component of a distributed system that

exchanges messages that belong to a protocol for a transaction with one or more other

components of the distributed system is additionally aware of a state of an other component, the

state being relevant to the protocol and the method comprising the steps practiced in the other

component of determining the relevant state [col 9, line 65 – col 10, line 4] and augmenting a

message sent according to the protocol with state information indicating the relevant state of the

other component the first component using the state information to optimize the protocol [Fig 4,

read-only flag in the command, col 9, lines 59-65].

Claim 6:

Burns discloses the relevant state indicates whether the transaction will modify data in

the other component [Fig 4, col 9, line 59 – col 10, line 5]

Claim 8:

Burns discloses the distributed system is a distributed database system and the

components are database systems therein [Fig 4]

Claim 10:

Burns discloses a method of executing a two-phase commit protocol for a transaction, the

transaction involving a coordinator and a cohort and the method comprising the steps performed

in the cohort of: augmenting a message that the cohort sends to the coordinator as part of the

transaction with state information indicating whether the transaction will modify the cohort [Fig

4, read-only flag in command, col 9, lines 59-65], and responding to messages received from the

coordinator as required by the commit protocol, the coordinator sending a message of the

commit protocol to the cohort as determined by the state information [col 9, line 65 – col 10, and

col 10, line 61 – col 11, line 9]

Claim 12:

Burns discloses the data storage device contains code which, when executed by a

processor performs the method of claim 11 [Fig 4]

Claim 13:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 2 [Fig 4]

Claim 14:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 3 [Fig 4].

Claim 15:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 4 [Fig 4]

Claim 16:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 5 [Fig 4].

Claim 17:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 6 [Fig 4].

Claim 18:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 7 [Fig 4].

Claim 19:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 8 [Fig 4].

Claim 20:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 9 [Fig 4].

Claim 21:

Burns discloses the data storage device contains code which, when executed by a

processor, performs the method of claim 10 [Fig 4].

Claim 22:

Burns discloses a coordinator in a distributed system that coordinates a protocol

employed with a transaction that exchanges messages with one or more other components of the

distributed system, the coordinator having the improvement comprising: retained state

information that retains state of an other component that is relevant to the protocol, the

coordinator receiving a message of the protocol from the other component which has been

augmented with the state information [Fig 4, read-only flag in the command, col 9, lines 59-65]

retaining the state information from the augmented message in the retained state information, and

using the retained state information to optimize the protocol [col 9, line 65 – col 10, line 4 and

col 10, line 10, line 61 – col 11, line 9]

Claim 23:

Burns discloses the protocol ensures that the results of the transaction are consistent in the components; and the retained state information for the other component indicates whether the transaction will modify data in the other component [col 9, line 65 – col 10, line 4]

Claim 25:

Burns discloses wherein the distributed system is a distributed database system and the coordinator and the other component are database systems therein [Fig 4]

Claim 26:

Burns discloses a cohort in a distributed system, the cohort being involved in a transaction which employs a protocol that is coordinated by a coordinated and exchanging messages of the transaction with the coordinator, the cohort having the improvement comprising: a message of the protocol that is augmented with state information indicating a state of the cohort which is relevant to the protocol [Fig 4, read-only flag in the command, col 9, lines 59-65], the cohort sending the message to the coordinator and the coordinator retaining the state information and using the retained state information to optimize the protocol [col 9, line 65 – col 10, line 4 and col 10, line 10, line 61 – col 11, line 9]

Claim 27:

Burns discloses the protocol ensures that the results of the transaction are consistent in the components; and the state information in the augmented message indicates whether the transaction will modify data in the cohort [col 9, line 59 - col 10, line 4]

Claim 29:

Burns discloses the distributed system is a distributed database system and the cohort and coordinator are database systems therein [Fig 4].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 7, 9, 24, 28, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Burns in view of US Pat No 5,335,343 issued to Lampson et al (hereafter Lampson).

Claims 3, 7, 24 and 28:

Burns discloses the elements of claims 11, 2, 5, 6, 22, 23, 26 and 27 as noted above.

Burns fails to disclose the protocol is a two-phase commit protocol, the first component is

the coordinator for the protocol, and in the step of using the retained relevant state to optimize

the protocol the first component sends a message that aborts the transaction to an other

component when the other component's state indicates that the transaction does not modify the

data in the other component.

Lampson discloses the protocol is a two-phase commit protocol, the first component is

the coordinator for the protocol, and in the step of using the retained relevant state to optimize

the protocol the first component sends a message that aborts the transaction to an other

component when the other component's state indicates that the transaction does not modify the

data in the other component [Figs 7 and 8 and col 6, lines 25-40].

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Burns to include the protocol is a two-phase commit protocol, the first

component is the coordinator for the protocol, and in the step of using the retained relevant state

to optimize the protocol the first component sends a message that aborts the transaction to an

other component when the other component's state indicates that the transaction does not modify

the data in the other component as taught by Lampson.

The ordinarily skilled artisan would have been motivated to modify Burns per the above

for the purpose of improving performance when using a two-phase commit protocol [col 2, lines

45-55].

Claim 9:

Burns discloses a method of executing a two-phase commit protocol for a transaction, the

transaction involving a coordinator and a cohort and the method comprising the performed in the

coordinator of receiving a message of the protocol from the cohort, the message being

augmented with sate information indicating whether the transaction modifies the cohort's data,

retaining the state information for the cohort [Fig 4, read-only flag in the command, col 9, lines

59-65, col 9, line 65 – col 10, line 4]

Burns fails to disclose if the state information for the cohort indicates that the transaction

does not modify the cohort, sending an abort message of the two-phase commit to the cohort

Lampson discloses if the state information for the cohort indicates that the transaction

does not modify the cohort, sending an abort message of the two-phase commit to the cohort

[Figs 7 and 8 and col 6, lines 25-40]

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Burns to include if the state information for the cohort indicates that the

transaction does not modify the cohort, sending an abort message of the two-phase commit to the

cohort as taught by Lampson.

The ordinarily skilled artisan would have been motivated to modify Burns per the above

for the purpose of improving performance when using a two-phase commit protocol [col 2, lines

45-55].

Claim 30:

Burns discloses a coordinator in a distributed system that coordinates a two-phase

commit protocol employed with a transaction that is involves one or more cohorts in the

distributed system, the coordinator having the improvement comprising: retained state

information that retains state of a cohort, the state indicating whether the transaction will modify

the cohort's data, the coordinator receiving a message of the protocol from the cohort which has

been augmented with the state information, retaining the state information from the augmented

message in the retained state information [Fig 4, read-only flag in the command, col 9, lines 59-

65, col 9, line 65 – col 10, line 4].

Burns fails to disclose if the retained state information for the cohort indicates that the

transaction does not modify the cohort's data, sending an abort message of the two-phase commit

protocol to the cohort.

Lampson discloses if the retained state information for the cohort indicates that the

transaction does not modify the cohort's data, sending an abort message of the two-phase commit

protocol to the cohort [Figs 7 and 8 and col 6, lines 25-40].

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to modify Burns to include if the retained state information for the cohort indicates

that the transaction does not modify the cohort's data, sending an abort message of the two-phase

commit protocol to the cohort as taught by Lampson.

The ordinarily skilled artisan would have been motivated to modify Burns per the above

for the purpose of improving performance when using a two-phase commit protocol [col 2, lines

45-55].

Claim 31:

Burns discloses a cohort in a distributed system in which a coordinator in the distributed system coordinates a two-phase commit protocol employed with a transaction that involves the cohort, the cohort having the improvement comprising: a message of the protocol that is augmented with state information indicating whether the transaction will modify the cohort's data, the cohort sending the message to the coordinator and the coordinator retaining the state information [Fig 4, read-only flag in the command, col 9, lines 59-65, col 9, line 65 – col 10, line 4 and col 10, line 10, line 61 – col 11, line 9]

Burns fails to disclose if the retained state information for the cohort indicates that the transaction does not modify the cohort's data sending an abort message of the two-phase commit protocol to the cohort

Lampson discloses if the retained state information for the cohort indicates that the transaction does not modify the cohort's data sending an abort message of the two-phase commit protocol to the cohort [Figs 7 and 8 and col 6, lines 25-40]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Burns to include if the retained state information for the cohort indicates that the transaction does not modify the cohort's data sending an abort message of the two-phase commit protocol to the cohort as taught by Lampson.

The ordinarily skilled artisan would have been motivated to modify Burns per the above for the purpose of improving performance when using a two-phase commit protocol [col 2, lines 45-55].

Response to Arguments

Applicant's arguments filed 5/3/2004 have been fully considered and are partially

persuasive. However, to advance prosecution by eliminating unnecessary arguments, supra new

art rejection is made. Examiner introduces new prior art, i.e., Burns for the teaching of an

augmented message. Examiner retains Lampson for the disclosure of an abort step in the process

of two-phase commit.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Etienne LeRoux whose telephone number is (703) 305-0620.

The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Safet Metjahic, can be reached on (703) 308-1436.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Etienne LeRoux

6/4/2004